

ABSTRACT

A method for treating a fluoro-carbon dielectric film for integration of the dielectric film into a semiconductor device. The method includes providing a substrate having a fluoro-carbon film deposited thereon, the film having an exposed surface containing contaminants, and treating the exposed surface with a supercritical carbon dioxide fluid to clean the exposed surface of the contaminants and provide surface termination. The supercritical carbon dioxide treatment improves adhesion and electrical properties of film structures containing a metal-containing film formed on the surface of the fluoro-carbon dielectric film.